

5/46

<b>DART AEROSPACE LTD</b>	<b>Work Order:</b>	24723
<b>Description:</b> Doubler	<b>Part Number:</b>	D3144-13
05.11.02 C <i>[Signature]</i>		
Dwg: D3144 Rev. <i>[Signature]</i>	<b>Qty:</b>	10
<del>04.12.01 KJ/RF</del>		Page 1 of 1

Step	Location	Procedure	By	Date	Qty
1	DC	Issue Traveler	<i>[Signature]</i>	05.11.02	10
2	PG	Issue P/O: <u>2008889</u> Email or Ship DXF file to vendor Laser Cut D3144-13 flat pattern per Dwg D3144 Possible Supplier: GFI or Industrial Laser <b>Material release note is required</b>	AP	05/11/02	10
3	RG	Receive and Inspect for transit damage <b>Enure material release note is attached</b>	<i>[Signature]</i>	05/11/04	10
4	QC6	Inspect dimensions as per Dwg D3144	<i>[Signature]</i>	05/12/13	10
5	GA	Deburr	SAD	05/12/20	10
6	FP	Chemical Conversion Coat per QSI 005 4.1	SAD	05/12/20	10
7	FP	Powder Coat Black Sandtex (Ref: 4.3.5.7) per QSI 005 4.3	A.M	06-04-03	10
8	QC3	Inspect Powder Coat	MM	06-04-03	10
9	ST	Identify and Stock Loc. SA --	<i>[Signature]</i>	04/4/05	10
10	AC	Cost / part: _____	<i>[Signature]</i>	04/04/05	10
11	DC	Close W/O Inspect Level 21	<i>[Signature]</i>	06/04/06	10

Rev	Date	Change	Revised By	Approved
A	04.11.29	New issue	KJ/RF	<i>[Signature]</i>

RELEASED  
*[Signature]* 04.11.30

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☒ No ☐ DQA: DD Date: 06/04/06  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

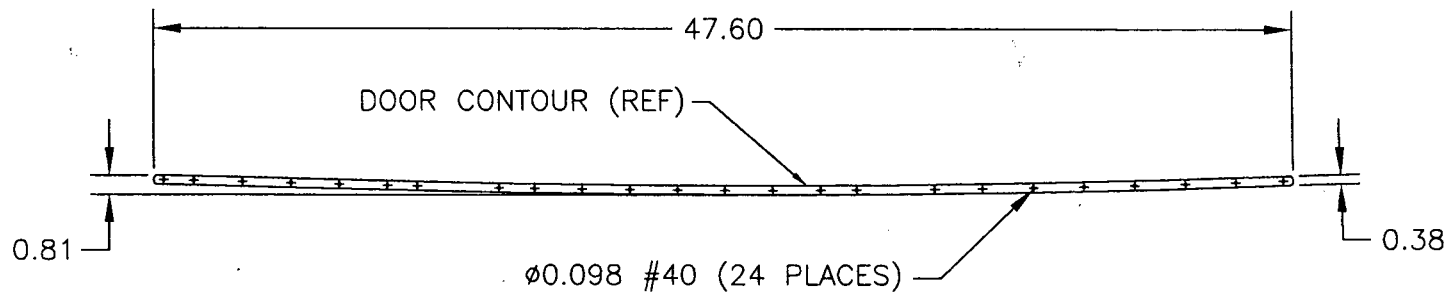
# PRELIMINARY ISSUE

DESIGN	RF	DRAWN BY	RF	DART AEROSPACE LTD
CHECKED		APPROVED		HAWKESBURY, ONTARIO, CANADA
DATE	05.10.19	TITLE	DOUBLER	REV. C
				SHEET 4 OF 9
				SCALE
				NTS

SHOP COPY  
RETURN TO  
ENGINEERING

UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE

WORK ORDER  
NO. 24723

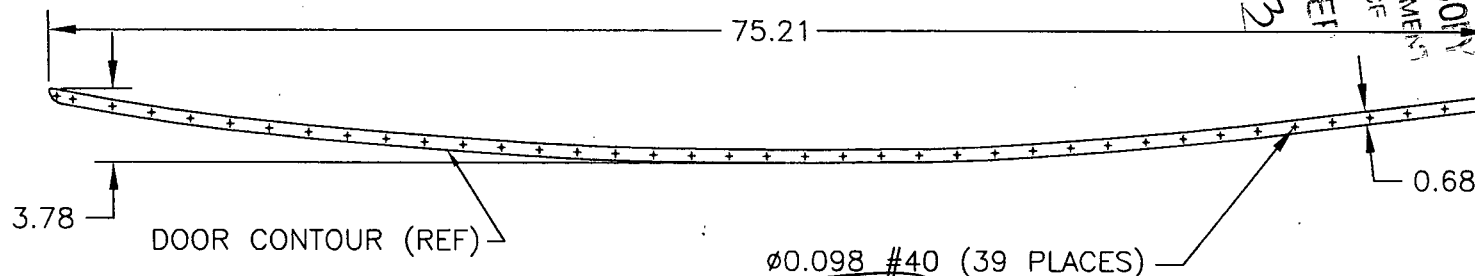


**D3144-15 DOUBLER**  
SCALE 1:8



**D3144-15 NOTES:**

- 1) MATERIAL: 2024-T3 SHEET (QQ-A-250/4) 0.032 THICK (REF DART SPEC M2024T3S.032)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT BLACK SANDTEX (4.3.5.7) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 6) MACHINE PER DRAWING FILE "D3144-C4.DWG"



**D3144-13 DOUBLER**  
SCALE 1:10

REPLACES PREMIER P/N B30-23000-211

**D3144-13 NOTES:**

- 1) MATERIAL: 2024-T3 SHEET (QQ-A-250/4) 0.020 THICK (REF DART SPEC M2024T3S.020)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT BLACK SANDTEX (4.3.5.7) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 6) MACHINE PER DRAWING FILE "D3144-C4.DWG"

# Job Costing Report

Dart Aerospace Ltd.  
Hawkesbury

Nov 02, 2005  
03:54 pm

Work Order No : 0024723  
Project Name : D3144-13  
Project For : WK546  
Work Order Type : Main  
Main WO Number :  
House Part Number : D3144-13  
Description : Doubler  
Manufactured : Yes  
Amount Req'd : 10  
Amount Done : 0  
Start Date : 11-02-05  
Est Finish Date : 11-17-05  
Act Finish Date :  
Drawings Req'd : No  
Ok for Approval :  
Approval Rec'd :

Department Code:  
Burden Flags : NNNNNNNN  
WO Status : Open  
Invoice State : Not Invoiced  
Invoice Date :  
Invoice Number :  
Invoice Amount : 0.00  
Order Entry No :  
OE Value : 0.00  
Est Mark Up : 0.000%  
Actual Mark Up : 0.000%  
\$0 Posted to Finished Goods

	Estimated	Actual	Var. %	Posted	To Post
Material Cost :	0.00	0.00	0.00	0.00	0.00
Engineering Hours :	0.00	0.00	0.00		
Engineering Cost :	0.00	0.00	0.00	0.00	0.00
Production Hours :	0.00	0.00	0.00		
Production Cost :	0.00	0.00	0.00	0.00	0.00
Packaging Hours :	0.00	0.00	0.00		
Packaging Cost :	0.00	0.00	0.00	0.00	0.00
OverHead Hours :	0.00	0.00	0.00		
OverHead Cost :	0.00	0.00	0.00	0.00	0.00
CNC Hours :	0.00	0.00	0.00		
CNC :	0.00	0.00	0.00	0.00	0.00
Misc. Hours :	0.00	0.00	0.00		
Misc. :	0.00	0.00	0.00	0.00	0.00
Burden :	0.00	0.00	0.00		
Total Cost :	0.00	0.00	0.00		
Mark up :	0.000	0.000			
Selling Cost :	0.00	0.00			

	Estimated	Actual
Labour Hrs/Amount Done :	0.00	0.00
Profits/(Loss) :	0.00	0.00

CERTIFICATE OF COMPLIANCE  
CERTIFICAT DE CONFORMITE



Membre de / A Member of **Thomas&Betts**

180 LABROSSE AVENUE  
POINTE CLAIRE, QC  
H9R 1A1

**DART AEROSPACE LTD**  
1270 ABERDEEN ST.  
HAWKESBURY, ON K6A 1K7

CERTIFICATE NO. **2** OUR JOB NO **J0135190** SHIPPING MEMO **0325138**

ITEM	QUANTITY	PURCHASE ORDER	PART NUMBER	REV	NAME	DWG ISSUE
--	<b>10 PCS</b>	<b>2008889</b>	<b>D3144-13</b>		<b>DOUBLER</b>	<b>C</b>

MATERIAL	SUPPLIED BY	MAT. REL. NO.
<b>AL 2024-T3 (QQ-A-250/4)</b>	<b>SAMUEL / KASIER ALUMINUM ATT'D</b>	<b>H/N 318740A8</b>

	PROCESS	PROCESSOR	RELEASE NOTE #
1			
2			
3			
4			
5			
6			
7			
8			
9			

WE HEREBY CERTIFY ALL THE PARTS COVERED BY THIS CERTIFICATE HAVE BEEN MANUFACTURED FROM MATERIAL SUPPLIED ON RELEASE NOTE SHOWN ABOVE AND THAT ALL PARTS HAVE BEEN INDIVIDUALLY INSPECTED AND CONFORM TO THE DRAWINGS AND PURCHASE ORDER REFERENCED ABOVE.

DATE **22 NOVEMBER 2005**

G.F.I. Q.C. REP.

*Patricia H. [Signature]*

607-05



Programme d'Assurance Qualité Enregistré / Registered Q.A. Program  
ISO 9001:2000 AS9100

**LETTRE DE CONFORMITÉ --LETTER OF COMPLIANCE****Date:** 18 NOVEMBRE 2005

**Company Name:** G.F.I. Division of Thomas & Betts limited  
**Address:** 180 avenue Labrosse  
**City:** Pointe Claire, Qué.  
**Zip Code:** H9R 1A1

**# du client:** 59583**# de commande SSMQ:** 848091**Customer's order #:****SSMQ's Order #:**

La présente est pour certifier que le matériel détaillé ci-dessous est conforme aux exigences de votre commande et des normes du grade tel que décrit:

The following is to certify that the material listed below meets your order requirements and grade standards as described:

Notre/Our Item #	# de pièces/ # of pieces	Épaisseur/Grandeur Guage/Size	Alliage/Trempe Alloy/Temper	Spécification / Specification	Lot/Heat
2	1	.020" X 48" X 144"	2024 T3	AMS-QQ-A-250/4	318740A8

Bien à vous,  
Yours truly,



Commis à l'administration.  
Administration Clerk.

## SHIP TO:

SAMUEL  
SHIP TO  
2360 DIXIE ROAD  
MISSISSAUGA, ON, CA

# KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215  
Phone: (800) 367-2586

## SOLD TO:

SAMUEL  
2225 FRANCIS HUGHES  
LAVAL, PQ, CA H7S1N5

## CERTIFIED TEST REPORT

Serial Number

4020327

CUSTOMER PO NUMBER: N16484		CUSTOMER PART NUMBER:		SHIPPING RUN #/LOAD ID: 100154/1		GOVT CONTRACT NUMBER:	
KAISER ORDER NO: 1011719	LINE ITEM: 3	SHIP DATE: 8-OCT-2004	ALLOY: 2024	CLAD: BARE	TEMPER: T3		
WEIGHT SHIPPED: 7050 LB	QUANTITY: 2 PCS EST.	B/L NUMBER: 202829	GAUGE: 0.0200 IN	WIDTH: 48.000 IN	LENGTH: 0.000 IN		

### Certified Specifications

AMS 4037/RevN

AMS-QQ-A-250/4/RevA

ASTM B 209/Rev04

Test Code: 1504

### Test Results

Lot: 318740A8 Cast 198

Drop 34

Ingot 4

Tensile:	Temper	Dir / # Tests		Ultimate KSI (MPA)		Yield KSI (MPA)		Elongation %			
	T3	LT / 2 (Min:Max)		65.1 : 66.9 (449 : 461)		44.1 : 45.3 (304 : 312)		16.6 : 17.8			
Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.10	0.29	4.47	0.57	1.34	0.02	0.08	0.02	0.01	0.00	TOT 0.03

### ALLOY LIMITS

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
2024 MIN	0.00	0.00	3.80	0.30	1.20	0.00	0.00	0.00	0.00	0.00	EACH	0.05
MAX	0.50	0.50	4.90	0.90	1.80	0.10	0.25	0.15	0.05	0.05	TOT	0.15

Aluminum Remainder

### CERTIFICATION

KAISER ALUMINUM & CHEMICAL CORPORATION (KAISER) HEREBY CERTIFIES THAT METAL SHIPPED UNDER THIS ORDER WAS MANUFACTURED IN THE U.S.A. AND HAS BEEN INSPECTED, TESTED, AND FOUND IN CONFORMANCE WITH THE REQUIREMENTS OF THE APPLICABLE SPECIFICATIONS AS INDICATED HEREIN. ALL METAL WHICH IS SOLUTION HEAT-TREATED COMPLIES WITH AMS 2772 (MIL-H-8088). ANY WARRANTY IS LIMITED TO THAT SHOWN ON KAISER'S STANDARD GENERAL TERMS AND CONDITIONS OF SALE. TEST REPORTS ARE ON FILE, SUBJECT TO EXAMINATION. ISO-9001:2000 CERTIFIED

BILL POYNOR, LABORATORIES SUPERVISOR

